

METHODS AND APPARATUSES FOR LAUNCHING UNMANNED AIRCRAFT,
INCLUDING RELEASABLY GRIPPING AIRCRAFT DURING LAUNCH AND
BRAKING SUBSEQUENT GRIP MOTION

ABSTRACT OF THE DISCLOSURE

Methods and apparatuses for launching unmanned aircraft and other flight devices or projectiles are described. In one embodiment, the aircraft can be launched from an apparatus that includes a launch carriage that moves along a launch guide. The carriage can accelerate when portions of the carriage and/or the launch guide move relative to each other. A gripper carried by the launch carriage can have at least one grip portion in contact with the aircraft while the launch carriage accelerates along the launch axis. The at least one grip portion can move out of contact with the aircraft as the launch carriage decelerates, releasing the aircraft for takeoff. A brake can arrest the motion of the gripper after launch.